

Dr. Harold A. Zahl Dies, Former Dir. Of Research

FORT MONMOUTH — Dr. Harold A. Zahl, the grand old man of Fort Monmouth research and development, is dead.

He died in Riverview Hospital, Red Bank, Sunday, following surgery earlier in the week. He was 68.

Although he retired in January of 1966, the former Director of Research for all of Fort Monmouth's laboratories, was active as a consultant with the Army Electronics Command until he entered the hospital last week.

He lived on a 50-acre farm in Holmdel, where he raised and sold thousands of Christmas trees over the past 25 years. He and his family planted, cultivated and harvested the trees themselves.

Among the many honors accorded Dr. Zahl for his inventions in radar and for other scientific achievements are the Harry Diamond Award of the Institute of Electrical and Electronics Engineers, the Legion of Merit — given when he served as a major and lieutenant colonel during World War. II — and the Army Decoration for Exceptional Civilian Service, one of the government's top civilian awards.

Dr. Zahl's career at Fort Monmouth started in 1931, when he came here with a brand new PhD from the State University of Iowa. The career spans almost the entire electronic spectrum, from rooms full of electronic tubes to tiny integrated circuits, from the gigantic "bedspring" antennas of early radar to man-portable satellite communications equipment that can be heard around the world.

His inventions include two vacuum tubes which first made it possible for early radars to transmit and receive from the same antennas, and the VT-158, generally known as the "Zahl Tube," which pushed radar into the megacycle operating range. Both proved invaluable in World War II.

Dr. Zahl participated in the early Bikini atom bomb tests, worked on missile electronics at White Sands, N.M., assisted in the design of the first U.S. satellites, and took active leadership in Fort Monmouth's tracking of early satellites.

In 1948 he was the first Army scientist to achieve a position under Public Law 313. Such positions, and their salary level above normal civil service grades, are reserved for professional personnel "who have attained a level of competence and national eminence which makes them outstandingly qualified."

Author of numerous scientific papers, he also found time to be an author in other fields. He has published two books, "Electrons Away, or Tales of a Government

Scientist," and "Radar Spelled Backwards," and in 1958 wrote a first person award story, "Colton's Baby Comes Through" for the Readers Digest.

He also wrote numerous science fiction stories under the pen name "Christopher James," the combined names of his two oldest sons.

He was a fellow of the Institute of Electrical and Electronics Engineers and the American Physical Society and was a founding member of the Armed Forces Communications and Electronics

Dr. Harold A. Zahl 1904 - 1973

Association. He served on the national board of directors of both IEEE and AFCEA.

Dr. Zahl's honorary fraternities included Gamma Alpha and Sigma Xi. He received his higher education at North Central College, Naperville, Ill., where he was named a distinguished alumnus in 1964, and the State University of Iowa.

In addition to his national honors, Dr. Zahl was given the Distinguished Achievement Award by the Service Clubs of Long Branch in 1963 and the Outstanding Civilian Award of the Federal Business

Association of New York in 1964.

Dr. Zahl was born August 24, 1904 in Chatsworth, Ill., the son of the Rev. and Mrs. Arthur Herman Zahl. In 1948 he married the former Miss Vera Virginia Hiller, and the couple has three sons, James, born in 1949, Christopher, born in 1951, and Harold, born in 1955.

He was buried Tuesday (March 13) in Holmdel Cemetery after services in Christ Episcopal Church, Kings Highway, Middletown, and his body lay in state at the same church Monday night from 7 to 9.

pioneering studies sponsored by the Advanced Research Projects Agency, Office of the Director of Defense Research and Engineering—will be the focus of major attention.

Both of the reports bear the same title, *Seismology and the New Global Tectonics*, published in November 1968 and October 1969 by the Lamont Geological Observatory of Columbia (N.Y.) University, they have stimulated widespread scientific interest in plate tectonics theory.

Keynote speaker is Prof. William R. Muehlenberger, Department of Geological Science, University of Texas at Austin, who in recent years has added to his scientific reputation as a lunar geologist consultant serving NASA.

The banquet speaker is Dr. Walter Pitman, Lamont-Doherty Geological Observatory, Columbia (N.Y.) University, who will discuss solar drift, magnetic forces and various aspects of plate tectonics theory and determinations to date.

Featured in the "science address" is Dr. Fanya Atwater of Scripps Institute, La Jolla, Calif., a young lady who has distinguished

HumRRO Issues FY 72 Publications Guide

The Human Resources Research Organization (HumRRO) has issued its *Bibliography of Publications and Presentations During FY 1972*.

Included are publications by staff members in professional journals and presentations at professional and military meetings. Items are classified under the research code name (Work Unit or Research Project) or under the type of research effort to which they relate.

Additional information may be obtained from: Human Resources Research Organization, 300 North Washington St., Alexandria, Va. 22314

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record for total participation, but that the 1974 meeting will have entries from four additional regions—with new sponsors at Louisiana State University at Baton Rouge, the University of Texas, Indiana State University and the University of Missouri at St. Louis. This addition will extend the JSHS Program to provide representation from states having 77 percent of the U.S. population.

Dr. Zahl, Former ECOM Research Director, Dies

One of the most illustrious exemplars and the most outspoken advocate of the challenges and the opportunities of a career in Army science, Dr. Harold A. Zahl, former director of research, U.S. Army Electronics Command, died early in March. He was 68.

In the September 1961 edition of the *Army Research and Development Newsmagazine*, Dr. Zahl authored a long feature article headlined: "30-year Army Career Scientist Cites Government Service Rewards."

Soon after he received his doctorate in physics from the State University of Iowa in 1931, Dr. Zahl embarked on what he often called "the fun and the excitement" of being an Army scientist. He retired in 1966 for "health reasons" but continued as an ECOM consultant to his death.

Dr. Zahl's career was an exciting one, spanning the electronics pioneering developments, the emergence of radar as a critical science in World War II, and the evolutionary growth into the miracles of electronics today.

Two of his inventions contributed importantly to that growth and to the World War II story of radar. The "Zahl Tube," VT-158, pushed radar into the megacycle operating range. His expertise drew him into the early Bikini Islands atom bomb tests, and he assisted in the design of the first U.S. satellites.

Anderson, Jack Hildreth, Charles Thompson, Richard Seemiller, Carol Cutchall, James Clodfelter, SP5 John Schindel, SP4 William Scoville, PFC Raymond Nagel and PFC Steven Ingram.

Fairfax County authorities expressed appreciation to the Army and Air Force and said that without the lights, operations at night would have been nearly impossible.

Numerous honorary awards came to him for outstanding achievements, including the Harry Diamond Award of the Institute of Electrical and Electronics Engineers. He also was the first Army scientist to achieve the prestige and salary of appointment to a Public Law 313 position—limited by Congress in number and reserved for personnel "who have attained a level of competence and national eminence which make them outstandingly qualified."

Affiliated with numerous professional societies, and a founding member of the Armed Forces Communications and Electronics Association, he served on the national boards of directors of the IEEE and the AFCEA.

Known for many professional journal publications during his career as an Army scientist, and the author of numerous technical reports, he turned to literature as a "second career" following his "retirement" in 1966.

He authored two books, "Electrons Away, or Tales of a Government Scientist" and "Radar Spelled Backwards," both evidencing his zest for governmental intrigue and excitement during World War II and his rollicking humor.

Funeral services in Holmdel, NJ, where he owned a 55-acre farm on which he resided during his long career as an Army scientist, attracted hundreds of associates and many high leaders of research and development.

VARIES



DR. HAROLD A. ZAHL

Harold A. Zahl, Scientist, Author

HOLMDEL TOWNSHIP — Dr. Harold A. Zahl, physicist, inventor, soldier and author, died yesterday at Riverview Hospital, Red Bank, at the age of 68. He was a retired Army lieutenant colonel and former director of research at the U.S. Army Electronics Laboratory, Ft. Monmouth.

Dr. Zahl resided at 99 Middletown Rd., and formerly lived in Fair Haven. He was born in Chatsworth, Ill.

After receiving his bachelor of arts degree in physics and mathematics from North Central College, and his master of science and doctorate degrees in the same subjects from the State University of Iowa, Dr. Zahl began his research career.

The most important of his numerous, patented inventions is known as the Zahl Tube which allowed radar operators during World War II to transmit and receive signals on the same antenna.

In 1942, he was commissioned by the Army as a major at Ft. Monmouth. In 1946 he participated in the atomic bomb tests at the Bikini Atoll.

Dr. Zahl wrote two books on his scientific specialties, "Electrons Away or Tales of a Government Scientist," and "Radar Spelt Backwards." He wrote hundreds of short stories and magazine articles, including a Reader's Digest first person award story in August of 1958. Some of his works were published under his pen name, Christopher James, which he derived from the names of his first two children.

He was the recipient of many honors including the Legion of Merit and the Meritorious Civilian Service Medal from the Armed Forces, and the Outstanding Civilian Award from the Federal Business Association of New York. He also was the subject of numerous newspaper and magazine articles, many of which were written for and appeared in The Asbury Park Press.

Dr. Zahl founded what is now known as the Armed Forces Communications and Electronics Association. He was a fellow in the Institute of Radio Engineers and the American Physical Society, and was a member of numerous fraternal organizations and government and civilian technical committees.

Dr. Zahl owned the 50-acre Hazienda Evergreen Plantation here. He was a member of the American Christmas Tree Growers Association, and the New Jersey Farm Bureau.

He attended Christ Episcopal Church, Middletown Township.

Surviving are his widow, the former Vera V. Hiller; three sons, James F., Christopher, and Harold, all at home; a brother, Paul A., Washington, and three sisters, Mrs. Lillian Meloney, Los Angeles; Mrs. Helen Gillespie, Tacoma, Wash., and Mrs. Frances Munson, Battle Creek, Mich.

The Worden Funeral Home, Red Bank, is in charge of arrangements.

Dr. Harold Zahl dies at age 68

HOLMDEL—Dr. Harold A. Zahl, 68, former director of research at the Fort Monmouth Laboratories, died yesterday at River-view Hospital, Red Bank. He was a resident of 99 Middletown Rd., Holmdel, where he had lived for the past 13 yeears, formerly living in Fair Haven.

Dr. Zahl was attached to the fort's laboratories for 35 years and he had been a participant in the Bikini Atoll test of the Atomic Bomb. He was a noted inventor and author and one of his most important patents made it possible to transmit and receive with the same radar antenna.

Dr. Zahl attended Christ Episcopal Church, Middletown, was a member of the American Christmas Tree Growers Assn, New Jersey Farm Bureau and was the owner of the Hazienda Evergreen Plantation, which he developed into fifty acres since 1956.

He was the author of two books, "Electrons Away of Tales of a Government Scientist," and "Radar Spelled Backwards."

He wrote hundreds of short stories and articles under his own name and under his pen name of Christopher James.

He received a bachelor of science degree at North Central College, Naperville, Ill. and a masters degree and doctorate in philosophy at State University of Iowa.

Dr. Zahl was awarded a direct commission as a major in 1942 and when he left the service he was elevated to lieutenant colonel. He received the

Meritorious Civilian Service Medal and was a fellow of the Institute of Electrical and Electronics Engineers.

He founded the Armed Forces Communication and Electronics Association.

He joined the Fort Monmouth Laboratories in 1931 and participated in many Signal Corps research and development projects, including work on sound, infrared, electron tubes and radar.

He was closely connected with radar from its inception and had earlier helped to develop an infrared detection device which was outmoded by radar. However, the infrared device became the heart of the "sidewinder" missile system and it is still in use as a means of tracking manned and unmanned missiles during launching.

His development of the "Zahl Tube" allowed development of lightweight radar and a mortar locating set.

He was singled out for several honors, including the "Man Behind the News," Electronics Weekly; "Microwave People," The Microwave Journal; Exceptional Civilian Service Decoration, Dept. of the Army; Distinguished Achievement Award, Long Branch Service Clubs; Outstanding Civilian Award, Federal Business Association; and Distinguished Alumnus, North Central College.

He was born in Chatsworth, Ill. and received his primary and secondary

education in California.

Dr. Zahl is survived by his wife, Mrs. Vera V. Hiller; three sons, James F., Christopher A. and Harold A., all at home; a brother, Paul, Washington, D.C.; and three sisters, Mrs. Lillian Meloney, Los Angeles, Calif., Mrs. Helen Gillespie of Tacoma, Wash., and Mrs. Frances Munson of Battle Creek, Mich.

The Worden Funeral Home, Red Bank, is in charge of arrangements.